

## RINGKASAN

Seledri (*Apium graveolens* L.) merupakan tanaman yang digunakan untuk penyedap masakan di Indonesia dan dapat dimanfaatkan sebagai penurun kadar kolesterol, mengobati tekanan darah tinggi dan penghilang rasa mual (Permadi, 2006). Pertumbuhan seledri juga dipengaruhi oleh berbagai faktor, seperti hama dan penyakit tanaman, unsur hara, serta kerapatan tanaman. Tujuan dari penelitian yaitu mengetahui pengaruh perlakuan jenis pupuk kandang dan kerapatan tanaman terhadap pertumbuhan dan hasil seledri.

Penelitian dilaksanakan April sampai Juni 2018 di Desa Limpakuwus, Kecamatan Sumbang, Kabupaten Banyumas, Indonesia. Penelitian disusun menggunakan Rancangan Acak Kelompok (RAK) 2 faktor. Faktor pertama adalah jenis pupuk kandang, yaitu: pupuk kandang ayam (P1), pupuk kandang kambing (P2), dan pupuk kandang sapi (P3), dengan dosis 20 ton/ha. Faktor kedua adalah kerapatan tanaman, yaitu: 20 tanaman (K1), 25 tanaman (K2), 30 tanaman (K3) per m<sup>2</sup>.

Hasil analisis ragam menunjukkan bahwa aplikasi jenis pupuk kandang menunjukkan tidak berpengaruh nyata terhadap semua perlakuan yang diamati pada karakter pertumbuhan dan hasil seledri. Hal ini diduga karena ketersediaan unsur hara sangat dipengaruhi oleh tingkat dekomposisi atau mineralisasi dari bahan-bahan yang terkandung dalam pupuk kandang sehingga belum tersedia untuk seledri.

Perlakuan kerapatan 30 tanaman memberikan pengaruh lebih besar dibandingkan dengan kerapatan 20 dan 25 tanaman per m<sup>2</sup>. Hal ini diduga karena semakin besar jumlah populasi yang tumbuh dalam lingkungan yang sama juga menyebabkan adanya persaingan dalam mendapatkan air, nutrisi dan intensitas sinar matahari. Adanya persaingan menyebabkan jumlah daun semakin banyak namun jumlah anakan sedikit. Jumlah daun seledri dari kerapatan 20, 25 dan 30 tanaman per m<sup>2</sup> adalah sebagai berikut 18,71; 21,62 dan 28,04 helai, sedangkan jumlah anakan sebesar 2,87; 3,53 dan 3,44 helai. Hasil analisis kandungan khlorofil a menunjukkan bahwa kerapatan 30 tanaman per m<sup>2</sup> memiliki kandungan khlorofil tertinggi, yaitu sebesar 0,0216 mg/g.

Aplikasi pupuk kandang belum mampu meningkatkan karakter pertumbuhan dan hasil seledri, namun secara umum aplikasi pupuk kandang ayam relatif mampu memberikan hasil tinggi pada karakter pertumbuhan dan hasil seledri. Aplikasi pupuk kandang kambing dan kerapatan tanaman mampu meningkatkan kadar khlorofil a.

## SUMMARY

*Celery (Apium graveolens L.) is a plant who often used as flavouring a portion of food in Indonesia. Celery can be used as a discharger cholesterol level, potion high pressure of blood and remover feel loathing (Permadi, 2006). Grow of celery plant influence by another factor, like a pest and disease of plant, nutrients, and plant density. This research was carried out with the following objectives: 1) to know the effect of the type of manure treatment on the growth and yield of celery plants (Apium graveolens L.); 2) knowing the effect of treatment of plant density on growth and yield of celery plants; 3) knowing the plant density and type of manure that are effective against the growth and yield of celery plants.*

*The research was carried in Limpakuwus Village Sumbang District Banyumas, Indonesia from April until June 2018. Analysis chlorophyll of celery was doing in Laboratory of Agroecology and Laboratory of Agronomy and Horticulture Faculty of Agriculture Jenderal Soedirman University Purwokerto, Indonesia. An experiment was arranged in Randomized Block Design by using 2 factors: The first factor is a variety of manure, that is chicken manure (P1), goat manure (P2), and cow manure (P3), with dose 20 ton/hectare, The second factor is the density of plants, that is 20 crops (K1), 25 crops (K2), 30 crops (K3)/m<sup>2</sup>.*

*The results of various analyses showed that the application of type manure showed no noticeable effect on all the treatment observed in the character of growth and results of celery. This is suspected because the availability of nutrients is strongly influenced by the level of decomposition or mineralization of materials contained in manure so that it is not available for celery.*

*The 30 density treatment of plants gives greater influence compared to 20 density and 25 plants per m<sup>2</sup>. This is suspected because the greater number of populations growing in the same environment also leads to competition in gaining water, nutrients and the intensity of sunlight. The competition caused the number of leaves more and less but the number of saplings. The number of celery leaves from the density of 20, 25 and 30 plants per m<sup>2</sup> is as follows 18.71, 21.62 and 28.04 strands, while the number of tillers is 2.87, 3.53 and 3.44 strands. Results of the analysis of chlorophyll showed that the density of 30 plants per m<sup>2</sup> has the highest chlorophyll content, which is 0.0216 mg/g.*

*The application of manure has not been able to improve the character of growth and results of celery, but in general, the application of chicken manure is relatively capable of delivering high results in the character of growth and results of celery. Application of goat manure and plant density is able to increase the level of chlorophyll a.*